#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau



# 

#### (43) International Publication Date 21 May 2004 (21.05.2004)

### (10) International Publication Number WO 2004/042477 A1

(51) International Patent Classification7: 7/027

G03F 7/039,

(21) International Application Number:

PCT/KR2002/002157

(22) International Filing Date:

19 November 2002 (19.11.2002)

(25) Filing Language:

Korean

(26) Publication Language:

English

(30) Priority Data:

2002-0067882

4 November 2002 (04.11.2002)

- (71) Applicant (for all designated States except US): DONGJIN SEMICHEM CO., LTD. [KR/KR]; Gajwa-dong 472-2, Seo-ku, 405-250 Incheon-city (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SON, Eun-Kyung [KR/KR]; 625-3 Yodang-ri, Yangkam-myeon, Gyeonggi-do, 445-931 Hwaseong-city (KR). KANG, Jae-Hyun [KR/KR]; 625-3 Yodang-ri, Yangkam-myeon, Gyeonggi-do, 445-931 Hwaseong-city (KR). KIM, Deog-Bae [KR/KR]; 625-3 Yodang-ri, Yangkam-myeon. Gyeonggi-do, 445-931 Hwaseong-city (KR). KIM,

Jae-Hyun [KR/KR]; 625-3 Yodang-ri, Yangkam-myeon, Gyeonggi-do, 445-931 Hwaseong-city (KR).

- (74) Agent: YOU ME PATENT & LAW FIRM: Teheran Bldg., 825-33, Yoksam-dong, Kangnam-ku, 135-080 Seoul (KR).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CHEMICALLY AMPLIFIED POLYMER HAVING PENDANT GROUP WITH DICYCLOHEXYL AND RESIST COMPOSITION COMPRISING THE SAME

(57) Abstract: The present invention relates to a chemically amplified polymer having a pendent group with dicyclohexyl bonded thereto, a process for the preparation thereof, and a resist composition comprising it, and more particularly, to a novel (meth)acrylic or norbornene carboxylate compound with dicyclohexyl bonded thereto, a process for the preparation thereof, a chemically amplified polymer synthesized therewith, and a positive photoresist composition for ArF comprising said polymer, with high resolution and excellent etching resistance.